From: **Kelley Chase/R3/USEPA/US**
Sent: 4/12/2012 11:08:28 AM

To: Richard Rupert/R3/USEPA/US
CC:
Subject: Fw: Dimock - HT for Micro Issue

Rich -

Fetzer asked me to pass along the contact info for our biologist in Fort Meade who is reviewing the micro data. Looks like you already have hi info - but I attached it anyway just as a reminder.

- Kelley

----- Forwarded by Kelley Chase/R3/USEPA/US on 04/12/2012 11:06 AM -----

From: Dave Russell/ESC/R3/USEPA/US
To: Richard Rupert/R3/USEPA/US
Cc: Cynthia Caporale/ESC/R3/USEPA/US@EPA, Cynthia Metzger/ESC/R3/USEPA/US@EPA, Kelley Chase/R3/USEPA/US@EPA, Stevie Wilding/ESC/R3/USEPA/US, "Graves, Suddha" <Sgraves@TechLawInc.com>
Date: 02/29/2012 01:44 PM
Subject: Re: Dimock - HT for Micro Issue

Just to clarify: HPC results for samples that exceeded the 8-hour HPC holding time were qualified as "estimates" using a "J". As I noted below, no HPC results were rejected (qualified with an "R") based on holding time. Many HPC sample results have been rejected ("R") due to the failure of the Lab to use a blank control plate (a.k.a. sterility control plate, or method blank) with each set of samples plated. The lab appeared to have little experience running this HPC method, but they have improved. They are now using duplicate plates (they were not in the beginning) and will use hereafter a blank control plate with each set of samples plated.

So, to sum up, the main issue that has caused data to be rejected, has been the failure to use blank control plates. The lab has said they will use and document those controls from now on. Exceeding the holding time has only resulted in data qualified as estimates ("J").

In response to your other questions, Rich:

Correct HPC is mandated under the SWTR only.....except (and I only note this for completeness) there is a rare circumstance under the TCR where a system with coliforms growing in biofilms can apply for a variance to the TCR which would allow them to monitor using HPC as an indicator instead of total coliforms and E.coli.....but even then the holding time for HPC would be 8 hours.

Yes, if a courier gets the samples to NEEL within 6 hours, that should give NEEL enough time to plate them and begin incubation.....but the lab needs to know they are working against time and that there is an 8-hour limit. Communication between the field and the lab is important so that the analyst knows the samples are coming and is ready to begin analysis as soon as they arrive.

Hope this helps.

Dave

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From: Richard Rupert/R3/USEPA/US
To: Cynthia Caporale/ESC/R3/USEPA/US@EPA
Cc: Cynthia Metzger/ESC/R3/USEPA/US@EPA, Dave Russell/ESC/R3/USEPA/US@EPA, Kelley Chase/R3/USEPA/US@EPA, Stevie Wilding/ESC/R3/USEPA/US, "Graves, Suddha" <Sgraves@TechLawInc.com>
Date: 02/29/2012 09:01 AM
Subject: Re: Dimock - HT for Micro Issue

If I am understanding all that Dave has written, the main issue is holding times? I would also agree that the appropriate reference given the origin of the samples is the Total Coliform Rule and Ground Water Rule. And the issue is for heterotrophic bacteria, which are not covered under either the TCR or GWR, but, the Surface Water Treatment Rule correct?

We do need to continue to analyze for bacteria as we did for the first sampling activity. I was thinking we had been using a courier and getting the samples to the lab in 6 hours, but I also seem to remember we later discovered that there was a longer holding time so went with a different option.

So if we use a courier and get the samples to the lab in 6 hours will we meet acceptable criteria?

thanks
Rich

Richard Rupert,
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"The commander in the field is always right and the rear echelon is wrong, unless proved otherwise."
Colin Powell

From: Cynthia Caporale/ESC/R3/USEPA/US
To: Cynthia Metzger/ESC/R3/USEPA/US@EPA, Richard Rupert/R3/USEPA/US
Cc: Dave Russell/ESC/R3/USEPA/US@EPA, Stevie Wilding/ESC/R3/USEPA/US, Kelley Chase/R3/USEPA/US@EPA
Date: 02/28/2012 03:31 PM
Subject: Dimock - HT for Micro Issue

Cindy,

As per our conversation here are the HTs for micro, which are dependent on the various techniques used. Dave has been reviewing the micro results from NEL and the HTs have not been met for the HPC analysis (either samples not received on time or lab not aware of the 8 hour HT). Hence results have been qualified "R."

For the January/February sampling, NEL was contracted to complete HPC, Total Coliform and E coli. I'm including Rich on this email in case we want to discuss any changes for the March sampling. If you wanted us to consider accepting these samples the HPC holding time would be an issue since these samples could not arrive in time for analysis.

Cindy

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----- Forwarded by Cynthia Caporale/ESC/R3/USEPA/US on 02/28/2012 03:17 PM -----

From: Dave Russell/ESC/R3/USEPA/US
To: Cynthia Caporale/ESC/R3/USEPA/US@EPA
Date: 02/23/2012 04:21 PM
Subject: Re: HT for Micro

The holding time for a micro sample always depends on the analyte and the rule under which the samples are being collected.

The HT for total coliforms, fecals or E. coli is **30 hours** under the TCR (TC, FC, E.coli) and the GWR (E. coli), **8 hours** under the SWTR (TC,FC), and **6 hours** under NPDES (TC,FC,E.coli). When reviewing Dimock data for TC/FC I have applied the **30 hour** holding time, and thus far, all samples have met that holding time.

The HT for heterotrophic plate count is **8 hours** under the SWTR. HPC is only used as an indicator under the SWTR. The **8-hour** holding time for HPC is stated in the SDWA Lab Cert Manual and twice in Standard Methods. For Dimock data I have applied the **8 hour** HT, and although many samples have not met this HT, the result has always been to qualify the data as an estimate and as such it can still be used (with a flag/qualifier). No HPC results have been rejected based on holding time.

In Standard Methods, the **8-hour** HT is given at 9060 B(1)b : *"Do not exceed 8 h holding time for heterotrophic plate counts."*, [clear and emphatic] and a second time at 9215 A(4): *"The recommended maximum elapsed time between collection and analysis of samples is 8 h (maximum transit time 6 h, maximum processing time 2 h). When analysis cannot begin within 8 h, maintain sample at a temperature below 4C but do not freeze. Maximum elapsed time between collection and analysis must not exceed 24 h."*

The two papers on bacteriological holding time published by EPA microbiologists in Cincinnati indicate that the bacterial community in a sample can begin to change as soon as the sample is collected. Bacterial abundance may increase, decrease or remain the same. Those findings make the last resort 24-hour option offered by SM rather indefensible, and even if the 24-hour HT was applied to Dimock HPC data, the samples were not held below 4C following collection.

Hope this answers the question.